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IDENTIFIERS	*Respiratory System

ABSTRACT

This module on the respiratory system is the ninth of ten (CE 028 308-318) in the barbering/cosmetology course of a bilingual skills training program. (A Vocabulary Development Workbook for modules 6-10 is available as CE 028 313.) The course is designed to furnish theoretical and laboratory experiences. Module objectives are for students to develop trade-related Spanish/English vocabulary, to describe the function of the respiratory system, to define the process of inhaling and exhaling, and to describe types of breathing and the breathing process. Contents include list of module objectives; pretest; four sections on (1) respiratory system, (2) inhaling and exhaling, (3) different types of breathing, and (4) the breathing process; posttest; and English/Spanish vocabulary list. Each section is organized into this format: instructions, vocabulary, and concepts (statements or questions to direct reading) presented in English and Spanish; readings; and worksheets to evaluate comprehension of the trade-related reading material. (Readings in modules 1-5 are both in English and Spanish.) Worksheets also cover these areas: vocabulary, definitions, word attack skills, writing skills, spelling, and application of terminology to the trade area. (YLB)

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ED199506

BILINGUAL SKILLS TRAINING PROGRAM
BARBERING/COSMETOLOGY

MODULE 9.0

RESPIRATORY SYSTEM

CE028317

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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NORTHERN NEW MEXICO COMMUNITY COLLEGE
EL RITO, NEW MEXICO 87530

I. PURPOSE

This module is to:

1. Assist students in developing trade-related vocabulary.

2. Facilitate the learning of the trade through reading information sheets, vocabulary lists and language exercises.

3. Provide student with individual check lists for individual progress.

II. INRODUCTION

Cosmetology and Barbering require the student to follow a defined theoretical course of study as well as acquire practical knowledge in the respective trade. Due to the limited amount of time allowed for theory and the difficulty of the technical vocabulary found in the reading, the student often needs additional help in this area. Students in above trades are required to pass the State Board Examination before practicing their trade. To succeed in passing this exam and to be better equipped for the job, the student must be able to function in the oral and written communication skills and utilize the technical vocabulary of their trade. This module is structured to provide for individual needs of the students so that they may progress at their pace in the academic or theoretical area. A simple coding system is utilized to facilitate the student use.

III. ACTIVITIES

Because each module is geared for individualized instruction it is important to assess the individual needs of the students. A pre-test is administered to students before they begin working with a module. Instructions are given orally in Spanish and English.

Instructions, vocabulary and concepts in each module are written in Spanish and English so as to explain the purpose of each reading. There is a reading for each objective presented in the module. The reading is referred to as an information sheet. This sheet is designed to provide the student with reading material incorporating the technical vocabulary that is needed in the trade skill area. The gradation of reading is from simple to more complex. Thus the information sheet facilitates the learning process in the theoretical course of study. Each information sheet is followed by a series of diversified work sheets directly checking for comprehension of the reading material Other items covered in these work sheets are: vocabulary, definitions, word attack skills, writing skills, spelling and application of terminology to the trade area.

Oral language development exercises directed by the instructor constantly reinforce the concepts presented. Students have an opportunity to utilize and develop the technical vocabulary needed in their trade by interaction among themselves, the instructor and tutors. The Bilingual dimension is specifically directed at concept and vocabulary development.

The students are directed to utilize supplementary materials available through the Learning Resource Center to reinforce each area as they progress in the module. Audio visuals are utilized to introduce subject matter. They are also accessible to the students to be used on an individual basis.

IV. EVALUATION

The students are evaluated by the instructors as to their progress in language and in the course content area through the pre-test, work sheets, check list and a post test. Individual student profiles and folders are kept on record to check on student progress at all times. Oral development skills are assessed individually.

Students go through the following process in utilizing the modules:

Pre-test (Students scoring 85% or below must complete the entire module. Those scoring above 85% may go on to the next module).

Reading of instruction sheet
Information sheet
Series of written and oral exercises
Oral evaluation
Post test (oral and written)
Recycling, if needed (Students scoring 85% or below on post-test are recycled through module in designated weak areas. See coding system.)

V. MODULE OUTLINE

9.0 Respiratory System

9.1 Respiratory System

9.2 Inhaling and Exhaling

9.3 Different Types of Breathing

9.4 The Breathing Process

STUDENT OBJECTIVES

Upon completion of this module the student will be able to:

9.1 Describe the function of the respiratory system

9.2 Define the process of inhaling and exhaling

9.3 Describe the different types of breathing

9.4 Describe the breathing process

PRE-TEST

1. Why is the respiratory system vital to the human body?

2. How is the blood in our system fed?

3. What two parts does breathing consist of?

4. What are the two important functions of the blood?

5. What is a good way to stimulate blood circulation?

6. What are the three different types of breathing?

7. Which is the most effective type of breathing and why?

8. Where is the respiratory system situated?

9. How do the cells in the brain control the breathing process?

10. What are the most important organs of the respiratory system?

Instructions:

In this reading selection you will see the important role played by the respiratory system. Below is a list of words which are important in this article. Read each word carefully before proceeding to the reading selction.

Instrucciones:

En esta selección de lectura verás el papel importante que tiene el sistema respiratorio. Abajo sigue una lista de vocabulario importante en este artículo. Lee cada palabra cuidadosamente antes de seguir con la selección de lectura.

Vocabulary	Vocabulario
glands	glándulas
respiratory system	sistema respiratorio
blood stream	corriente de sangre
circulation	circulación

Keep the following questions in mind as you read this article.
Recuerda las siguientes preguntas al leer este artículo.

1. What is the function of the respiratory system?
   ¿Cuál es la función del sistema respiratorio?

2. What are the two acts in breathing?
   ¿Cuáles son las dos partes de respiración?

3. Why should barbers and cosmetologists be familiar with the breathing process?
   ¿Porqué el cosmetólogo y el peluquero deben de estar conscientes del proceso de respiración?

Respiratory System

1. As you recall, a system is a group of organs that work together to perform a specific function. You have read about different systems and how important a role they play in your daily life. You found that mal-functioning glands of the endocrine system can badly damage the growth, health and reproduction of the human body. The respiratory system is also vital to the human body because it provides and controls breathing. Breathing consists of two parts or separate acts, breathing in or inhaling and breathing out or exhaling. This process called breathing is so important that without it a person cannot exist. A person can live without food for as many as sixty days but would die within minutes if air was not provided.

2. Barbers and cosmetologists must understand the breathing process because breathing also affects the healthiness of the hair and skin.

3. We know that the blood is carried to all parts of the body by the blood stream. Proper circulation of the blood to the scalp insures a healthy head of hair. The blood in our system is fed by the air that we breathe and in the manner which we breathe.

4. You will see in the next information sheet how breathing can help maintain a healthy scalp and skin condition.

Find The Answers:

1. Breathing consists of _____parts?

   A. One B. Two C. Three

2. The word in paragraph 1 which means failure to operate normally is _____.

3. The words "is fed by the air that we breathe" in paragraph 3 refers to _____.

4. The story does not say so, but it makes you think that;

   A. Air causes us to choke.
   B. Air is more important than food for our bodies.

5. On the whole this story is about;

   A. Mal-functioning glands
   B. The air we breathe.
   C. The food a person requires.

6. Blood is fed by air.

   Yes No Does not say

7. Why is proper circulation of the blood to the scalp necessary?

   A. So your hair will not grow.
   B. So the blood will condition your hair.
   C. To insure a healthy head of hair.

Answer the following questions:

1. Why is the respiratory system vital to the human body?

2. How is the blood in our system fed?

3. What are the two separate acts of breathing?

4. How is the blood carried to all parts of the body?

5. Why is proper circulation of the blood to the scalp important?

Choose the word that is spelled correctly. 9.1

1.	breething	breathin	breathing
2.	circulation	serculation	cerculation
3.	endocrene	endocrine	endowcrine
4.	reproduction	reaproduction	reproducktion
5.	exhaleng	exhaleing	exhaling

In the following paragraph make all necessary corrections.

We know that the Blood is carried to all parts of the body by the blood stream proper Circulation of the blood to the scalp insures a healthy head of hair the blood in our System is fed by the Air that we breathe and in the maner which we breath.

Instructions:

In this reading selection you will see the process of inhaling and exhaling. Below is a vocabulary list with important words found in the reading. Read each word carefully.

Instrucciones:

En esta selección de lectura verás el proceso de inspiración y exhalación. Abajo sigue una lista de vocabulario de palabras importantes en este artículo. Lee cada palabra cuidadosamente.

Vocabulary	Vocabulario
inhale	inspirar
exhale	exhalar
oxygen	oxígeno
carbon dioxide	bióxido de carbono

Keep the following questions in mind as you read the information sheet.
Recuerda las siguientes preguntas al leer la página de informacíon.

1. What element found in the atmosphere is necessary for breathing?
   ¿Cuál elemento que se haya en la atmósfera es necesario para la respiración?

2. What is oxygen?
   ¿Qué es oxígeno?

3. What is the gas humans exhale?
   ¿Cuál es el gas exhalado por humanos?

4. What does blood circulation have to do with breathing?
   ¿Qué tiene que ver la circulación de la sangre con respiración?

Inhaling and Exhaling

1. Breathing consists of two parts, breathing in or inhaling and breathing out or exhaling. We say we need air in order to breathe. Actually it is the oxygen that is contained in the air that is necessary for breathing. Oxygen is also an element or gas that is odorless and tasteless that is found in the atmosphere, in water and in most rocks or minerals. Oxygen is also produced by plants which in turn help us to breathe.

2. We are being more exact when we say that breathing is the inhaling of oxygen and the exhaling of another gas called carbon dioxide. Carbon dioxide is a gas which is a poison to our system. This gas is useful to plants because they take in carbon dioxide and give off oxygen.

3. The blood actually performs the two very important functions of taking in oxygen and giving off carbon dioxide. The oxygen taken from the air is carried to all parts of the body by red cells in the blood stream.

4. You know that a healthy scalp and skin is affected by circulation of the blood. Poor circulation can be caused by improper breathing or problems with the red cells in the blood stream. You know that poor circulation can also be caused by nervousness which in turn produces a lack of oxygen. All these conditions can affect the growth and health of the hair and nails. A good way to stimulate the blood circulation is to massage.

Massaging the scalp and face does wonders for people that need to stimulate blood circulation. Massaging also calms the nerves and in turn helps the clients to breathe properly. Massage can harm some clients who may have high blood pressure and heart trouble.

5. There are three types of breathing which will be discussed in the next reading.

Find The Answers:

1. Oxygen is a

   A. Gas B. Plant C. Mineral

2. The word in paragraph 1 which mean mass of air surrounding the earth is _____.

3. The words "affected by circulation of the blood" in paragraph 4 refer to _____.

4. The story does not say so, but it makes you think that;

   A. Oxygen is poisonous.
   B. Plants are useful to us because they give off oxygen.
   C. Massage is bad for circulation.

5. The blood gives off oxygen.

   Yes No Does not say

6. On the whole this story is about;

   A. Blood
   B. Breathing
   C. Circulation

7. When you exhale you breathe out;

   A. Oxygen
   B. Blood
   C. Carbon dioxide

True or False

_____1. Breathing consists of 3 parts.

_____2. You inhale carbon dioxide.

_____3. Oxygen is a gas.

_____4. You inhale oxygen.

_____5. Oxygen is produced by plants.

_____6. Breathing consists of 2 parts.

_____7. Oxygen is carried to all parts of the body by white cells.

_____8. Carbon dioxide is poison to our system.

_____9. Poor circulation increases your oxygen intake.

____10. Carbon dioxide is useful to plants.

Make any necessary corrections to the following paragraph.

we are being more exact when we say That breathing is the enhaling of oxygen and the exhaling of another gas called Carbon dioxide carbon dioxide is a gas which is a poison to our system this gas is useful to plants Because they take in carbon dioxide and give off oxygen.

Arrange the following words in alphabetical order.

oxygen _____

breathing _____

inhaling _____

exhaling _____

odorless _____

minerals _____

atmosphere _____

carbon dioxide _____

blood _____

healthy _____

circulation _____

conditions _____

stimulate _____

massage _____

nervousness _____

scalp _____

skin _____

functions _____

poison _____

contained _____

Answer the following questions:

1. Describe oxygen.

2. What is breathing?

3. What are the two functions that blood performs?

4. What are the causes of poor circulation?

5. What is a good way to stimulate the blood circulation?

6. When can massage be harmful?

7. What are the benefits of massage?

8. What conditions affect the growth and health of the hair and nails?

Instructions:

In this reading selection you will read about the different types of breathing. Study the vocabulary list below before proceeding to the reading.

Instrucciones:

En esta selección de lectura leerás de los diferentes tipos de respiración. Estudia la lista de vocabulario antes de seguir con la lectura.

Vocabulary	Vocabulario
abdominal breathing	respiración abdominal
diaphragm	diafragma
lungs	pulmones
capillaries	capilares
bacteria	bacteria
mucus membrane	membrana mucosa

Keep the following questions in mind as you read the reading selection.
Recuerda las siguientes preguntas al leer la selección de lectura.

1. What is breathing
   ¿Qué es respiración?

2. What is the most effective way of breathing?
   ¿Cómo es el modo más eficaz de respiración?

3. What is abdominal breathing?
   ¿Qué es respiración abdominal?

4. Describe nose breathing.
   Describe respiración nasal.

1. You have read that breathing is inhaling of oxygen and exhaling of carbon dioxide. You have also learned that breathing affects the condition of the skin, hair and nails because breathing affects the circulation of the blood. Remember that blood carries food and oxygen to all the cells of the body.

2. There are correct and incorrect ways of breathing. When there is a lack of oxygen or air the body has special means of seeking the necessary oxygen. One very simple means is yawning. A person who knows how to breathe properly is more likely to be healthier than a person that does not breathe properly.

3. The most effective means of exhaling carbon dioxide and inhaling oxygen is called <u>abdominal breathing</u>. Abdominal breathing occurs when a person involves the diaphragm or muscle that separates the chest and stomach area. Abdominal breathing involves the diaphragm and all the space in the lungs.

4. Another type of breathing is called mouth breathing. Mouth breathing is the least effective type of breathing because it does not involve the expansion of the lungs in order to exhale carbon dioxide.

5. Nose breathing is a more effective type of breathing than mouth breathing. In nose breathing the air is warmed by the surface capillaries and the bacteria that may exist in the air is caught by the nose hairs which, you may recall, line the mucous membrane of the nasal pasage.

6. In the next reading you will read about how human parts of the body are involved in breathing.

Find The Answers: 9.3

1. The most effective means of breathing.

   A. Nose
   B. Abdominal breathing
   C. Mouth

2. The word in paragraph 1 which means flow is _____.

3. The words "involves the diaphragm and all the space in the lungs" in paragraph 3 refer to _____.

4. The story does not say so, but it makes you think that;

   A. Nose breathing involves some abdominal breathing.
   B. Mouth breathing involves use of your diaphragm.
   C. Abdominal breathing does not involve the diaphragm.

5. Yawning is a way of seeking oxygen.

   Yes No Does not say

6. On the whole, this story is about;

   A. Abdominal breathing
   B. Mouth breathing.
   C. Different types of breathing.

7. When do you get rid of carbon dioxide?

   A. When you exhale.
   B. When you breathe in.
   C. When you inhale.

Answer the following questions: 9.3

1. What is the most effective type of breathing and why?

2. What is the least effective type of breathing?

3. What is the most effective means of exhaling carbon dioxide?

4. When does abdominal breathing occur?

5. What is a simple way of seeking the necessary oxygen?

True of False:

_____1. Breathing affects circulation of the blood.

_____2. An ineffective way of breathing is abdominal breathing.

_____3. Blood carries food to all cells of the body.

_____4. A way of seeking necessary oxygen is yawning.

_____5. Abdominal breathing involves the diaphragm and all the space in the lungs.

_____6. Breathing does not affect circulation of the blood.

_____7. Mouth breathing is very effective.

_____8. Nose breathing is more effective than mouth breathing.

_____9. Nose hairs line the mucous membrane of the nasal passage.

_____10. Nose breathing is not effective.

Fill in the blanks.

_____breathing is more effective _____of breathing.

_____nose breathing _____air is _____

by the _____capillaries and bacteria that _____

exist in _____air is _____by the _____

hairs which,_____may recall, _____the

mucous _____of the _____passage.

Give a definition for each of the following words.

1. Oxygen _____

_____

_____

2. Carbon dioxide _____

_____

_____

3. Abdominal breathing _____

_____

_____

4. Mouth breathing _____

_____

_____

5. Nose breathing _____

_____

_____

Instructions:

In this reading selection you will see the process involved in breathing. Study the words below before proceeding to the reading.

Instrucciones:

En esta selección de lectura verás el proceso de respiracíon. Estudia las palabras que siguen abajo antes de proceder con la lectura.

Vocabulary	Vocabulario
chest cavity	cavidad de pecho
respiratory organ	órgano respiratorio
trachea (windpipe)	tráquea (tubo respiratorio)
lungs	pulmones
pharynx	faringe

Keep the following questions in mind as you read the following article.
Recuerda las siguientes preguntas al leer el siguiente artículo.

1. What controls the breathing process?
   ¿Qué controla el proceso de respiración?

2. What are the most important organs of the respiratory system?
   ¿Cuáles son los órganos más importantes del sistema respiratorio?

3. What passages does air take as you inhale?
   ¿Porcúales pasajes pasa el aire cuando inspiras?

The Breathing Process

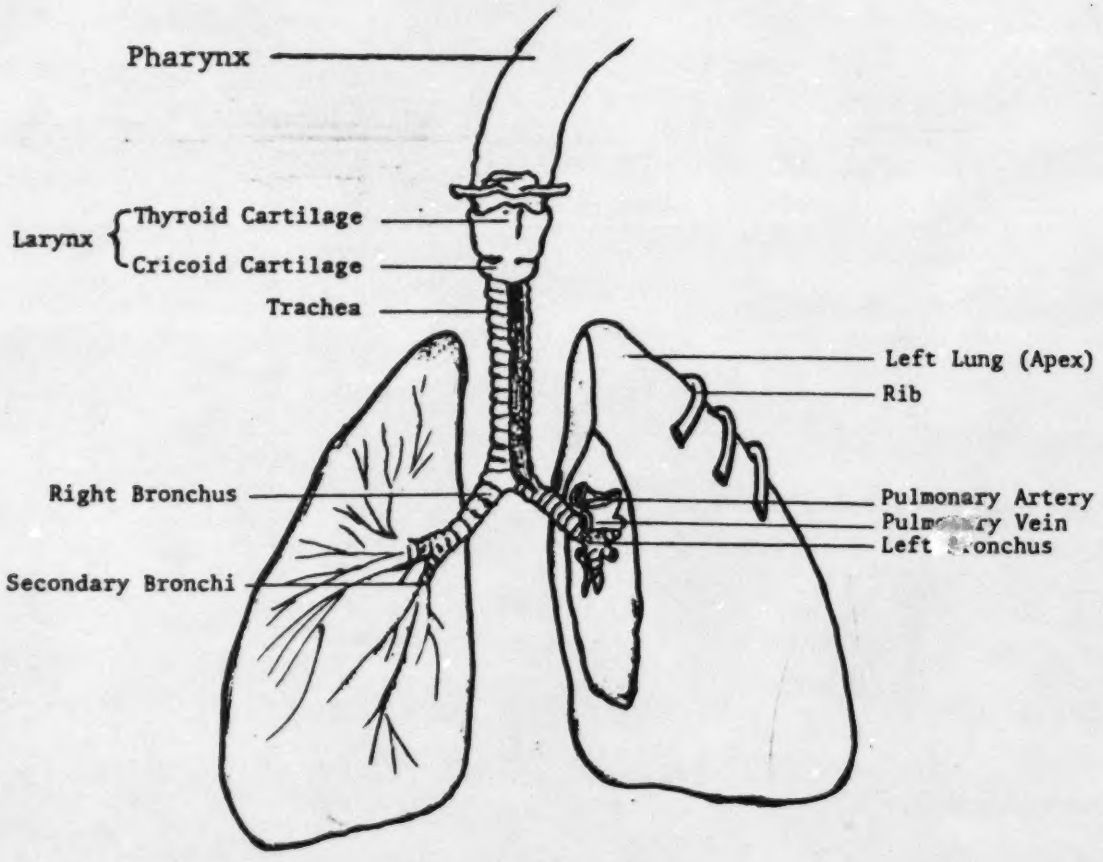
1. The respiratory system or the system for breathing is composed of vital parts or organs. This system is situated within the chest cavity. These vital organs are protected on both sides by the ribs. Many times a broken rib can puncture or damage a vital respiratory organ. Let us see how these organs aid a person in breathing.

2. Air is warmed and filtered by the nose as we have mentioned. The cells in the brain control the whole breathing process. They operate the muscles of the chest to expand and contract like a pump opening and closing. The warm air moves along from the nose into a wind pipe or trachea. This air or oxygen is then carried to the lungs by bronchial tube. A person who is sick with bronchial pneumonia will definitely need an oxygen mask or tent to help the lungs.

3. The human body is provided with two lungs, a right lung and a left lung. Lungs act like pumps. They pump in a fresh supply of oxygen and pump out carbon dioxide.

4. The most important organs of the respiratory system are the trachea or windpipe, the bronchial tubes and the lungs. Air inhaled through the nose passes down the pharynx, trachea and bronchial tubes, into the lungs. See the diagram below and follow the passage the air takes when you breathe.

The Respiratory System



Find The Answers:

1. The vital organs of the respiratory system are protected by;

   A. Lungs
   B. Ribs
   C. Brain

2. The word in paragraph 1 which means necessary to the maintenance of life is _____.

3. The words "pump in a fresh supply of oxygen" in paragraph 3 refer to _____.

4. The story does not say so, but it makes you think that;

   A. Air travels from the nose into the lungs through the respiratory system.
   B. The lungs are not important in the respiratory system.
   C. Cold air is more beneficial to your system than warm.

5. Oxygen is carried to the lungs by a bronchial tube.

   Yes No Does not say

6. On the whole this story is about;

   A. Breathing process
   B. Windpipe
   C. Oxygen

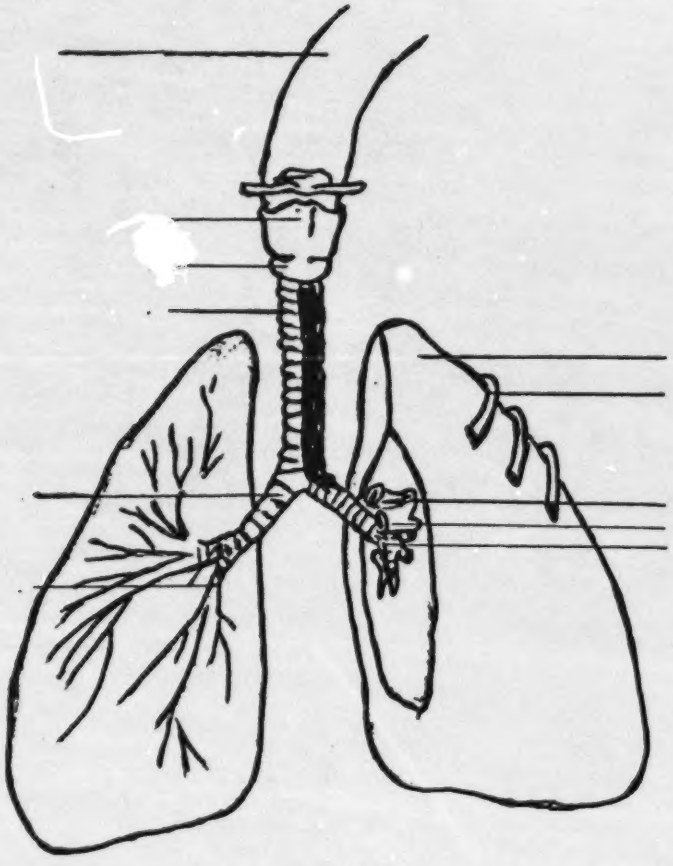
7. How many lungs does our body have?

   A. Four
   B. One
   C. Two

Look at the list of words below. Circle the R if the word is spelled correctly. Circle the W is the word is spelled wrong and spell the word correctly.

R	W	respertory	_____
R	W	cavity	_____
R	W	filtered	_____
R	W	oxegen	_____
R	W	pneumonea	_____
R	W	lungs	_____
R	W	carbone	_____
R	W	broncial	_____
R	W	tracea	_____
R	W	windpipe	_____

Fill in the blanks in the drawing below.



Answer the following questions:

1. Where is the respiratory system situated?

2. What controls the whole breathing process?

3. What part does the nose have in the respiratory system?

4. What is the path of the air after it comes through the nose?

5. How many lungs does a human body have?

6. What do the lungs do?

7. What are the most important organs of the respiratory system?

8. How do the brain cells control the breathing process?

POST-TEST

1. What is a good way to stimulate blood circulation?

2. What are the most important organs of the respiratory system?

3. Where is the respiratory system situated?

4. What are the three different types of breathing?

5. What are the two important functions of the blood?

6. How is the blood in our system fed?

7. Why is the respiratory system vital to the human body?

8. What two parts does breathing consist of?

9. Which is the most effective type of breathing and why?

10. How do the cells in the brain control the breathing process?

Vocabulary	Vocabulario
affect	afectar
air	aire
atmosphere	atmósfera
blood	sangre
brain	cerebro
bronchial	bronquial
capillary	capilar
carbon dioxide	dióxido de carbón
chest	pecho
circulation	circulación
client	cliente
condition	condicción
contract	contractar
daily	diario
definite	definido
discuss	discutir
element	elemento
exact	exacto
exhale	exhalar
exist	existir
heart	corazón
important	importante
inhale	inhalar
insure	asegurar
lack	faltar
lung	pulmón
massage	masaje

Vocabulary	Vocabulario
membrane	membrana
nervousness	nerviosidad
odor	olor
organ	órgano
oxygen	oxígeno
passage	pasaje
pharynx	faringe
pressure	presión
process	proceso
produce	producir
provide	proveer
puncture	agujerear
respiratory	respiratorio
rib	costilla
role	función
separate	separar
stimulate	estimular
stream	corriente
trachea	tráquea
trouble	desorden
yawn	bostezo